

## ABSTRACT OF THE DISCLOSURE

A silicon oxide film (1701) serving as a gate insulating film of a semiconductor device contains Kr. Therefore, the stress in the silicon oxide film (1701) and the stress at the interface between silicon and the silicon oxide film are relaxed, and the silicon oxide film has a high quality even though it was formed at a low temperature. The uniformity of thickness of the silicon oxide film (1701) on the silicon of the side wall of a groove (recess) in the element isolating region is 30% or less. Consequently, the silicon oxide film (1701) has its characteristics and reliability superior to those of a silicon thermal oxide film, and the element isolating region can be made small, thereby realizing a high-performance transistor integrated circuit preferably adaptable to an SOI transistor and a TFT.